

Applicant(s): Gerhard Spekowitz, et al.  
Serial No.: 10/616,255  
Filed: July 9, 2003  
For: DISPLAY DEVICE WITH IMPROVED REPRESENTATION OF THE SHADES OF GRAY  
Art Unit: 2677  
Examiner: Chow, Doon Y.

Attorney Docket No.: PHD98164A

**IN THE CLAIMS:**

Please consider the following claims:

1-11. (previously cancelled)

12. (previously presented) A display device for correcting a brightness distribution of gray tone images displayed by a monitor driven by a plurality of electron rays, said display device comprising:

a correction unit operable to generate a plurality of output digital image signals in response to a reception of an input digital image signal representative of a set of gray tone values, each output digital image signal representative of a set of correction gray tone values corresponding to the set of gray tone values of the input digital image signal, the correction gray tone values collectively being representative of a correction of a brightness distribution of the gray tone values; and

a digital-to-analog conversion unit operable to convert the output digital image signals into a plurality of output analog image signals, said digital-to-analog conversion unit further operable to provide each output digital image signal to one of the electron rays whereby the brightness distribution of the gray tone images displayed by the monitor is corrected.

13. (previously presented) The display device of claim 12,  
wherein the input digital image signal includes n number of bits representative of  $2^n$  quantity of gray tone values; and  
wherein each output digital image signal includes n number of bits representative of  $2^n$  quantity of correction gray tone values.

14. (previously presented) The display device of claim 12,

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wherein the input digital image signal includes n number of bits representative of  $2^n$  quantity of gray tone values; and

wherein said correction unit includes a plurality of correction sets, each correction set including  $2^n$  quantity of correction gray tone values.

15. (previously presented) The display device of claim 12,  
wherein the input digital image signal includes n number of bits representative of  $2^n$  quantity of gray tone values; and

wherein each output digital image signal includes one or more bits representative of a quantity of correction gray tone values less than the  $2^n$  quantity of gray tone values.

16. (previously presented) The display device of claim 12,  
wherein the input digital image signal includes n number of bits representative of  $2^n$  quantity of gray tone values; and  
wherein said correction unit includes a plurality of correction sets, each correction set including a quantity of correction gray tone values less than the  $2^n$  quantity of gray tone values.

17. (previously presented) The display device of claim 12, further comprising:  
a photosensitive sensor operable to detect the brightness distribution of the gray tone images and to subsequently measure an ambient light surrounding the monitor.

18. (previously presented) The display device of claim 12, wherein said correction unit is further operable to calibrate the correction gray tones in response to a reception of one or more signals indicative of the brightness distribution of the gray tone images.